

Architect makes a specialty of designing healthy homes

By Cindy A. Adams
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When Houston architect LaVerne A. Williams, AIA, grew restless 25 years ago with the impending traditional trajectory of his career in commercial design, he decided to pursue something he really believed in — environmentally sound residential architecture, or “green” building.

Williams founded Environment Associates & Consultants in 1975, and since that time has developed a number of passive solar energy treatments. Williams built a “passive solar demonstration” home for the Southern Solar Energy Center in 1982, through which 20,000 people passed. But that demo home represents only a fraction of the wisdom Williams has parlayed into a thriving specialty for the southern climate.

Like others in green building today, Williams works from a holistic approach. That means considering the microclimate of a site: how best to orient the house to the sun’s path and natural wind patterns and maximize passive heating and cooling. The holistic approach determines everything from the placement, size and number of windows to the presence of roof overhangs and materials used.

Green building concepts are not necessarily new ones; many hark back to the way homes were designed before technology led builders to conquer, rather than work with, nature, according to Williams. Adequate roof overhangs, for example, have largely disappeared, but they block unwelcome heat from the sun and minimize upkeep.

“Less than 1 percent of well-maintained 100-year-old homes don’t have large overhangs,” he notes.

The green building also utilizes alternative materials. The Houston Audubon Society’s 1993 Hershey Conservation Award considers details like radiant barriers, placed materials like aluminum foil in the roof structure to reflect heat back out before it gets into an attic or top floor.

Materials such as Hebel, an aerated, autoclaved cement block from Germany, are a plus as well. Williams used Hebel in a 2,800-square-foot Austin home last year. With minimum ceiling heights of 10 feet, the all-electric home for a family of three also has natural light from at least two directions in every room. The family’s total energy bill in August 2000 was \$72.16, says Williams. Environment Associates also recommends IMST, a concrete block with internal insulation, and Faswell, a sturdy wood chip and cement block with a lot of mass.

In addition to his design work, Williams offers green seminars on request.

“Part of what we’re about is information,” he says. “The building community is slow to change unless the public demands it.”

One of his most vital roles is in educating owners about the health ramifications of their houses.

“A lot of what people are concerned about today are the health aspects of their home,” he says. “A

lot of people are moving into new homes and getting sick.”

Williams helps chemically sensitive clients identify materials to which they react, most often petrochemical-based material.

Solutions include natural, solid wood rather than treated plywood decking or cabinets of solid wood with a glue that doesn’t contain much formaldehyde, rather than particle board laminate. Finished concrete, clay, tile or natural hardwood floors are preferred over carpets. Williams prefers metal ductwork insulated on the outside, which can be cleaned better. He prefers HEPA filters to fiberglass ducts that can breed mold and mildew spores, especially in Houston’s humidity, and eventually will cause the system to lose its charge. Harvested rainwater

provides cleaner water than that which leaches material from traditional pipes.

Williams maintains that, if a builder sticks to the basics — foregoing items like whirlpools and fancy hardware — environmentally friendly construction costs are comparable to those of a well-built, higher-end production home. And costs are far less in the long run, in terms of utility bills, health costs and maintenance and upkeep.

“You’re not creating a liability for the environment and everyone else,” he says. “Every (non-green) home that’s built poorly is a drain on the planet in terms of wasted energy and high toxicity.” ■

Cindy A. Adams is a Houston-area freelance writer.

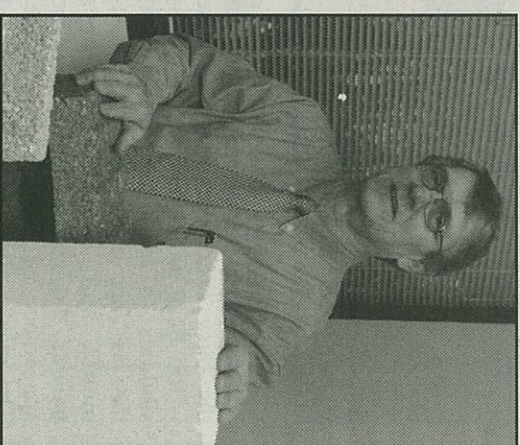


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“Green” architect LaVerne A. Williams, AIA, utilizes materials designed for health and energy-cost savings in homes he designs.



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